TRANSISTOR (NPN)

SOT-23

1. BASE
2. EMITTER
3.COLLECTOR

FEATURES

·High emitter-base voltage

·low on resistance

MARKING: MAX

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current -Continuous	0.3	A
P_C	Collector Power Dissipation	0.2	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	25			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	12			V
Collector cut-off current	I_{CBO}	V_{CB}=25 V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=12V, I_C=0			0.1	μA
DC current gain	h_{FE}(FOR)	V_{CE}=2V, I_C=4 mA	200		1000	
	h_{FE}(REV)	V_{CE}= 2V, I_C= 4mA	20			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C= 100mA, I_B=10 mA			0.25	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C= 100mA, I_B=10mA			1	V
Transition frequency	f_T	V_{CE}=10V, I_C= 1mA f=100MHz		60		MHz
output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		10		pF
On resistance	$R_{(on)}$	V_{in}=0.3V,I_B=1mA,f=1KHz		0.6		Ω

Typical characteristics